

AMENDMENT UNDER 37 C.F.R. § 1.111
Application Serial No. 10/759,155
Attorney Docket No. Q79358

REMARKS

Summary Of The Office Action & Formalities

Claims 1-5 are all the claims pending in the application. By this Amendment, Applicant is amending claims 1-4 and adding new claims 6-10. No new matter is added.

Submitted herewith is a Petition for Extension of Time with fee and an Excess Claim Fee Payment Letter with fee.

Applicant thanks the Examiner for acknowledging the claim to foreign priority and for confirming that the certified copy of the priority document was received.

Applicant also thanks the Examiner for initialing the references listed on form PTO/SB/08 submitted with the Information Disclosure Statement filed on January 20, 2004.

Claim 2 is rejected under 35 U.S.C. § 112, first paragraph, for the reason set forth at page 2 of the Office Action. Applicant is amending the claim to overcome this rejection.

Claims 3 and 4 are rejected under 35 U.S.C. § 112, second paragraph, for the reason set forth at page 2 of the Office Action. Applicant is amending the claims to overcome this rejection.

The prior art rejections are summarized as follows:

1. Claim 5 is rejected under 35 U.S.C. § 102(b) as being anticipated by Burt et al. (US 6,444,968).
2. Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Burt et al. (US 6,444,968).

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3. Claims 1, 3, and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ulich (US 5,013,917) in view of Burt et al. (US 6,444,968).

Applicant respectfully traverses.

Claim Rejections - 35 U.S.C. § 102

1. Claim 5 In View Of Burt et al. (US 6,444,968).

In rejecting claim 5 in view of Burt et al. (US 6,444,968), the grounds of rejection state:

Burt shows a method of detecting a light signal comprising the conversion of light signal into electric charges (column 1 line 54 to column 4 line 55), periodic sampling (column 1 line 54 to column 4 line 55), chained movement of samples through a memory towards a processing device (column 1 line 54 to column 4 line 55), and samples subjected to amplification by multiplication (column 1 line 54 to column 4 line 55).

Office Action at page 3. Applicant respectfully disagrees.

With reference to Fig. 1, Burt et al. discloses capturing an image in image area 2 and shifting the image to store section 3, before causing the stored signals to transfer “row to row as indicated by the arrow” from row 3a to output register 4 (*see* Fig. 1 and column 4, lines 38-55). However, Burt et al. does not teach or suggest “*chained* movement of said samples *through a memory . . .*” In fact, given that the number of rows of the image area 2 equal that of the store section 3, Burt et al. would suggest the contrary.

In view of at least the foregoing difference, the Examiner is kindly requested to reconsider and withdraw the rejection of claim 5.

Claim Rejections - 35 U.S.C. § 103

1. Claim 2 Over Burt et al. (US 6,444,968).

In rejecting claim 2 over Burt et al. (US 6,444,968), the grounds of rejection state:

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Referring to claim 2, it would be obvious to modify Burt to have an image region include only one row if the data to be transferred to the memory region was enough so that only one row of cells would be sufficient to transfer the data.

Office Action at page 3.

Applicant submits that this claim is allowable at least by reason of its dependency of claim 1 discussed below. Moreover, claim 2 is allowable, because Burt et al. does not teach or suggest a sensor with an “image region [that] comprises a total of one row of cells.” To the contrary, there are multiple rows for the image area.

2. Claims 1, 3, And 4 Over Ulich (US 5,013,917) In View Of Burt et al. (US 6,444,968).

In rejecting claims 1, 3, and 4 over Ulich (US 5,013,917) in view of Burt et al. (US 6,444,968), the grounds of rejection state:

Referring to claim 1, Ulich shows a lidar detection system comprising a device for emitting a light signal (figure 1 Ref 10), and a device for transmitting a returned portion of light (figure 1 Ref 24 and 26). Burt shows a sensor that converts light into an electrical signal comprising cells arranged in rows and columns (figure 1), an image region (figure 1 Ref 2), a memory region (figure 1 Ref 3), a read region (figure 1 Ref 4), a timing means (column 1 line 54 to column 4 line 55), and a processing device (column 1 line 54 to column 4 line 55). It would have been obvious to modify Ulich to include the lidar detection system taught by Burt because this system uses an efficient mean of collecting information returned by the light reflected from a target.

Referring to claim[s] 3 and 4, if the control voltage is in reference to the timing of the shifts along the columns, Burt shows a control voltage that controls the shift along the columns (column 4 lines 38-50). If the control voltage is in reference to the amplitude of multiplication that the signal will encounter upon entering the processing device Burt shows a gain control (figure 1 Ref 11).

Office Action at pages 3 and 4.

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Claim 1 recites that “each row of said image region is stepped through each row of said memory region.” This feature is neither taught nor suggested by Burt et al.

With reference to Fig. 1, Burt et al. discloses capturing an image in image area 2 and shifting the image to store section 3, before causing the stored signals to transfer “row to row as indicated by the arrow” from row 3a to output register 4 (*see* Fig. 1 and column 4, lines 38-55). However, Burt et al. does not teach or suggest stepping each row of the image region through each row of the memory region. Given that the number of rows of the image area 2 equal that of the store section 3, Burt et al. would suggest the contrary.

Moreover, regarding the alleged motivation to combine, the grounds of rejection do not satisfy the requirement to show some motivation *disclosed the prior art* that would have suggested to the skilled artisan to employ the CCD imager of Burt al. in the lidar system of Ulich. Rather, the grounds of rejection merely make the conclusory statement, without any specific citation to the prior art, that the system in Burt et al “uses an efficient mean of collecting information returned by the light reflected from a target.” “Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive [in the prior art] supporting the combination.” *In re Geiger*, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) (citing ACS Hosp. Sys. v. Montefiore Hosp. 221 USPQ 929, 933 (Fed. Cir. 1984)). Accordingly, the Examiner is kindly requested to specifically cite to a prior art disclosure that provides the requisite motivation to combine or modify the system of Ulich, or withdraw the rejection on this basis alone.

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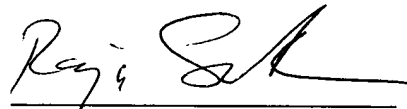
New Claims

For additional claim coverage merited by the scope of the invention, Applicant is adding new claims 6-10. Claims 6-8 are allowable at least because the prior art does not teach or suggest "that each row of said image region is stepped through each row of said memory region," as noted above. Claims 9 and 10 are allowable at least because the prior art does not teach or suggest that "the total number of rows of the image region is less than the total number of rows of the memory region." In fact, they are equal in Burt et al.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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WASHINGTON OFFICE

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